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THE IMPACT OF THE INTERNET ON HUNGARIAN FOOD CONSUMERS' WAYS OF SEEKING INFORMATION FROM THE ASPECT OF HEALTH AWARENESS

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INTRODUCTION

Health and its social impact root back several hundred years. Due to modern medical science, today it is easier to become healthier and to maintain this condition. Nevertheless, only very few people can claim that they are completely healthy. This tendency is partially caused by chronic illness and unhealthy lifestyle. People's health status can be controlled and changed mainly by themselves. For this reason, health attitude is especially important. SZAKÁLY (2011) defines the concept of health attitude as "the complexity of health-related attitudes which, as an element of healthy lifestyle, manifests itself as a behaviour resulting from health care needs and health-related motives". According to the approach of BAUM et al. (1997), health attitude involves every action and behaviour with the purpose to establish and maintain healthy conditions.

One of the essential aspects of health awareness is food consumption which has a significant role in converting to healthy lifestyle. However, the question arises which sources consumers can use to obtain the necessary information in the most effective way? Before the millennium, consumers had four main sources of information: specialised textbooks and periodicals, the opinions of relatives and friends, asking the physician or dietitian and relying on previous studies. However, the world has changed fundamentally and digital evolution took place during the last decade. As a result, the sources of information listed above were extended with the Internet.

One of the main components of healthy lifestyle is proper diet. When putting together one's diet, lots of information are needed in order to be able to pick from various foods which contribute to converting to a healthier lifestyle and maintaining it.

The main purpose of this study is to determine and show examples of the characteristics of online marketing which could help consumers in the conscious conversion to healthy lifestyle. Of the various factors, great emphasis is placed on online health-related information.

1. REVIEW OF LITERATURE

1.1. Characteristics of online consumer behaviour

The age of Internet had an especially great impact on consumers who represent one of the main actors on the market. In a 2014 analysis, IBM calls today's average consumers (both foreign and domestic consumers) "digitally enlightened" citizens, explaining this phrase by the fact that the road which leads to obtaining information and purchase has changed as a result of digitalisation (BREUER, 2014).

There have been many Hungarian studies about the process and model of the traditionally interpreted consumer and customer behaviour (HOFMEISTER-TÓTH, 2003; TÖRŐCSIK, 2007; TÖRŐCSIK, 2011), but only a few researchers examined its online forms (ESZES, 2011; BÁNYAI and NOVÁK, 2011). However, it can be stated that there is no significant difference between each step of the processes of online and traditionally interpreted consumer behaviour. All five independent steps of the process (1st step: identifying the problem; 2nd step: looking for information; 3rd step: processing information; 4th step: implementing the decision; 5th step: behaviour following the decision) can be supported also in an online environment.

The second step of the process, i.e. looking or browsing for information is more significant in the online environment in comparison with the traditional customer behaviour. It is enough to point out that most of the time online is spent searching for something (HULLÁMVADÁSZ, 2009). This finding is also confirmed by the 2008 survey of Jupiter Research, stating that 48% of Internet users' activities is spent searching online (ESZES, 2011). The efficiency of looking for online information in comparison with other media was also confirmed by GUO (2001), a marketing professional of the University of Texas: "The Internet is the first information-based platform which is able to provide immediate and basically unlimited amount of information to users in a searchable form, thereby contributing to the rationalisation of consumers' purchase decision processes".

In the following sections, this study aims to briefly describe the typical consumers above referred to as "digitally enlightened" citizens who are also called online or digital

consumers or e-consumers. It is hard to find a more attentive audience than online consumers as they are constantly looking for information, but they can also be convinced with facts and rational arguments. However, they can also be manipulated with pseudo-scientific false doctrines and they consider the classic methods of image establishment-focused promotion to be secondary. Nevertheless, their needs and attitudes are different in each situation, making them difficult to describe. For this reason, the technical literature regards digital consumers as “hybrid consumers” (JANAL, 1998; WALLACE, 2002; WIEDMANN et al., 2004; ZAVODNYIK, 2005; ESZES, 2011).

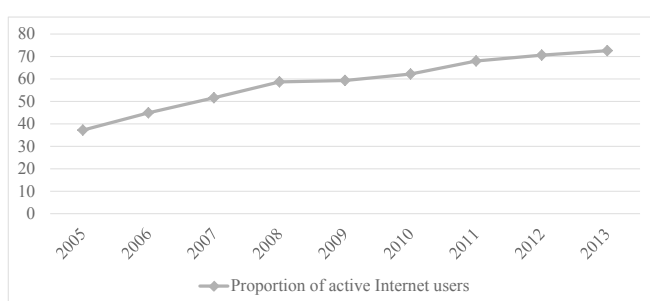
1.2. Examination of the Internet supply level and Internet penetration

This section focuses on the statistical indexes which describe the previously – generally – outlined online consumers both at the world level and in Hungary.

As a first step, the analysis focuses on Hungarian households' supply level of information and communication technologies (ICT). The speedy development of the recent years is shown by the fact that only 38% of households had Internet access in 2007 and broadband access amounted to only 33%. According to the latest data, this proportion increased to 71.5% by 2013 and the percentage of broadband access is 71%. Therefore, it can be concluded that nearly all households are connected to the Internet via broadband access (KSH 2014).

The worldwide proportion of active Internet users (those who used the Internet during the last three months) is 39% in the whole population. This relatively low proportion is greatly distorted by the very low indexes of certain African and Asian countries. The proportion of active Internet users in Hungary (Figure 1) is 72.6% (HCSO 2014) which can be compared mainly to the respective value of the EU28 Member States (76.5%). It follows from this comparison that Hungary is close to the EU level in terms of active Internet users and it can be concluded that Hungary does not lack active Internet users (IWS, 2014).

Figure 1. The proportion of active Internet users in Hungary, %



Source: Own edition based on HCSO 2014

1.3. Diet-related information and manipulation on the Internet

The motto of today's consumer society is “Buy, eat, consume!” and it perfectly reflects the intention to constantly maintain people's needs to consume. This state can be reached most effectively if the media generates constant discontent in consumers (FORGÁCS, 2010).

For many years, foods cannot be sold solely based on their taste. Modern consumers decide about what to eat as a result of marketing stimuli rather than hunger (FORGÁCS and FORGÁCS, 2011). It is important to use marketing communication which goes against traditional communication methods and attempts to arouse the interest of the previously mentioned digital consumers. Proper communication is also necessary, since 70% of food purchases are done as a result of impulsive and unconscious impacts (WEINBERG and GOTTWALD, 1982; ROOK, 1987). This way, the overwhelming majority of purchases become easily influenced by marketing experts. According to PACKARD (1971), marketing messages act on the behaviour of consumers with posthypnotic suggestions. People are unable to become aware of or protect themselves from these impacts. For long decades, the rational-verbal suggestions of physicians and dieticians could not overcome the previously mentioned psychological level and convey credible health care information in a proper way to consumers' consciousness (FORGÁCS, 2010). News spread online at unbelievable speed. From this aspect, the Internet could definitely be an effective form of communication in the field of conveying credible health care information. However, for the time being, false news and negative information appear in the online environment with the same tendency as in the case of traditional media. Today's ever-globalising market is full of food scandals which are generated by the media in the majority of cases. In 2006, German papers wrote down the phrase “food scandal” more often than the Iraqi war which was happening at the same time. The increasing food-related risks led to food phobia in lots of consumers. Orthorexia nervosa is a quickly spreading eating attitude and it also became more widespread as a result. Affected consumers tend to dogmatically believe in eating doctrines and they feel obliged to also initiate others to these doctrines. Nowadays, there are many more orthorexics among dieticians, naturopaths and civilians (FORGÁCS, 2010). This fact greatly brands the credibility of diet-related information, as consumers face a huge amount of information full of contradictions.

There is an increasing number of people joining the sects established by anorexics and bulimics (ProAna-proanorexia, ProMia-probulimia, ProEd-proeating) which appear also on forums, blogs and community sites. According to international research, 12.6% of teenage girls (between 13-17 years of age), 5.9% of boys and more than one third (35.5%) of patients suffering from eating disorders visit these sites (CUSTERS and VAN DEN BULCK, 2009; WILSON et al., 2006).

1.4. The future of transferring information: cellular mobile communication

In a previous study, FORGÁCS et al. (2013) already pointed out the significance of cellphones in transferring information by experts. Since 2010, mobile phones have become a significant tool for transferring media and they are frequently referred to as the “fourth display” (following movie theatres, television and the computer screen). The needs and problems of the constantly accessible consumer (“always connectedness”) can be fulfilled and solved real time with the help of various mobile applications. Mobile phones have become a convergent tool, since their original and primary function (voice transfer) was gradually pushed into the background. In turn, these devices are able to serve an increasing array of communication forms (payment, motion picture transfer, etc.) (HORVÁTH et al., 2013). The Mobility Report of Ericsson reveals that cellular mobile communication will still develop dynamically in the upcoming years. According to this research, the number of mobile subscriptions will be higher than the population of Earth by 2015. In the first quarter of 2014, 65% of all sold mobile phones were smartphones. The number of smartphone subscriptions will be higher than conventional phones by 2016 (ERICSSON, 2013). QR codes have a similar function as conventional barcodes, but they are able to contain much more information; therefore, they can provide consumers with these information quickly and simply. A smartphone application is needed to read this information. Forgács and colleagues envisioned a method of storing food-related data (consumed amount, ingredients, additives, etc.) of foods whose QR codes were read by the smartphone and these data could be cumulated and then compared with previous data. Smartphones could then provide health care predictions related to proper diet (FORGÁCS et al., 2013). Nowadays, this idea could be easily implemented. There are also attempts to provide solutions like this, such as the “Safebrand” application, which is able to read the QR codes on the packagings of various food products and to provide information based on this code.

1.5. Looking up health-related information on the Internet

The proportion of active Internet users was determined above. If they are viewed from a different perspective, it can be concluded that they are the ones who will most likely look for information online. This section focuses on the EU and Hungarian tendencies of looking for various information related to health, as well as the main sources of health care information.

The first step of analysis is surveying the ways of seeking online health-related information (illnesses, injuries, nourishment, health development, etc., those who were looking for information during the last three months). Special emphasis has to be placed on nourishment, which, even if shown in a differential way during the presentation of results, constitutes a significant part of analyses. Based on the cumulated Eurostat data, around every second Hungarian active Internet user

(49%) looks up health-related information online which is more than double of the respective value in 2007 (23%). This percentage is even somewhat higher than the EU28 average (44%) (EUROSTAT, 2014).

The following part of the study focuses on the proportion of Internet among the sources of health care information based on the findings of Szinapszis Market Research and Consultancy Ltd. 44% of respondents mentioned physicians as the primary source of health-related information. Internet is slightly behind this value with its 39% proportion. During the measurement of trust index, respondents rated the various sources of information to be between 1-5. Of these, the Internet had a 3.34 trust index and it was not much behind other categories (physicians – 4.21; specialised textbooks – 3.51; medical assistants – 3.38) which have been widespread among consumers for long decades. The analysis can be narrowed down to online tools (SZINAPSZIS, 2013). The primary source of looking up health care information is general search engines, or the so-called content aggregators (e.g. Google, Bing). The aim of these engines is to rank the content of each website based on various aspects, e.g. the most frequently visited and most often referenced sites (ESZES, 2011). 39% of respondents constantly look for information on these sites, while 42% of them use these search engines very frequently (SZINAPSZIS, 2013). The role of community media should also be emphasised, as these are online platforms and tools (blogs, wikis, community sites, video sharing sites etc.) which make it possible for users to share their opinions with others (ESZES, 2011). 57% of Internet users have browsed these sites (no information about the frequency of browsing) for health-related contents. The most usual site used for this purpose is Facebook (SZINAPSZIS, 2013).

2. MATERIAL AND METHODS

The theoretical background of this research was built on the review of relevant technical literature in which the findings of Hungarian and foreign models and research projects were used. During the secondary research, the process of online consumer and customer attitude was surveyed. More specifically, great emphasis was placed on looking up online information with respect to health-related factors. The various manipulation impacts on online diet-related information was also examined. Special emphasis was put on the survey of cellular mobile communication which can be regarded as one of the most effective future tools of conveying information.

The primary examination was constituted by a nation-wide questionnaire survey which was conducted by Szocio-Gráf Market Research and Public Opinion Pollster Institute in the spring of 2014 involving 1000 people. The questionnaire survey is representative from the aspects of region, settlement type, gender and age. Data collection was done with standard questionnaires during personal interviews at the homes of respondents. The questionnaire is based on closed questions which made it easier to record and analyse data.

In general, the questionnaire focused on the attitudes and purchase habits of online consumers. This paper presents the

online relations of looking for information about food products which is in close connection with consumers' habits of browsing for health care information. Data processing was performed using the statistical and mathematical software SPSS. This paper outlines the analysis of frequency distributions.

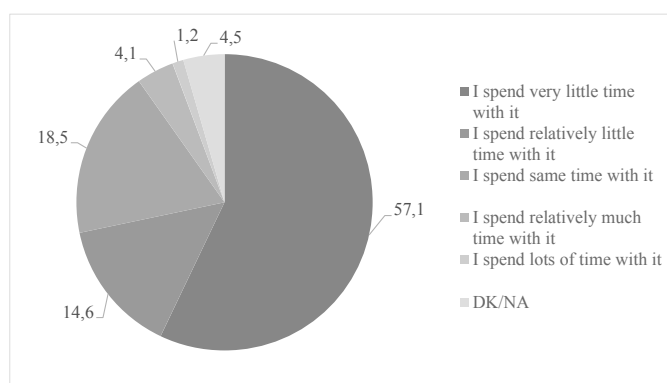
3. RESULTS AND DISCUSSION

This section aims at determining the tendencies of looking up online and offline food-related information based on the findings of the author's own research. As a next step, the study examines the distribution of online tools in searching for food information. The possible motives for searching for online food-related information is differentiated on the basis of the author's review of technical literature and primary research. As a last step, the general search for online food-related information is narrowed down to looking up information related to healthy or conscious food consumption on the basis of current research in this field.

3.1. Examination of searching for food-related information

This research primarily aimed at looking for online food-related information from the aspect of its proportion compared to offline search (conventional media, e.g. radio, television, public domain advertisements) (Figure 2). Respondents could provide their evaluation by using a scale from 1 to 5 where only the two extreme values were shown (1 – I spend very little time and 5 – I spend lots of time with looking for online information). Only orders of magnitude were provided for the different categories, no quantification was given in terms of the exact duration.

Figure 2. Comparison of online and offline searching for food-related information, %, N=1000



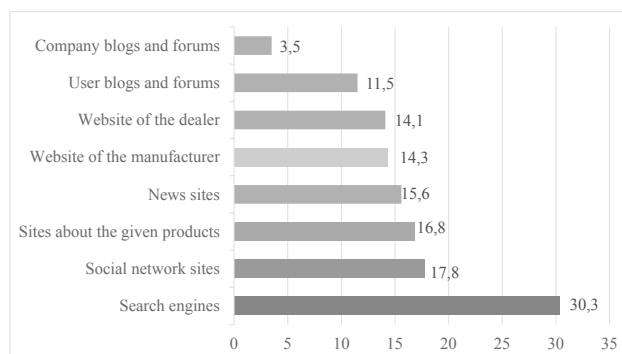
Source: Own edition, 2014

71.7% of respondents spend very little or relatively little time on the Internet looking for food-related information. However, during the analysis of this question, it can also be concluded that around every fourth respondent (23.8%) spends similar or higher amount of time browsing for food-related

online information. Therefore, the role of online solutions of looking for information about foods is essential.

Figure 3 shows the distribution of various online tools among the sources of information about foods. When answering the related question, respondents had to judge the listed online tools in terms of whether they use each of them when looking up food-related information in general.

Figure 3. The distribution of online tools in looking up food-related information, %, N=1000



Source: Own edition, 2014

In conformity with the preliminary review of technical literature, search engines (e.g. Google, Bing) were indicated by the highest proportion (30.3%) of respondents. It is important to point out that the second most frequently referenced community sites (e.g. Facebook, Twitter) are slightly ahead of official websites with their proportion of 17.8%. It follows from this finding that the most popular tools for looking up food-related online information are search engines and community sites and the latter of which is only a few years old.

3.2. Examination of searching for information about healthy food consumption

As it was mentioned above, putting together a proper diet is one of the main components of developing and maintaining a healthy lifestyle. Lots of information have to be collected in order to implement this goal. Both the author's previous research findings and other reviews of technical literature support the assumption that people potentially look for online information independently of whether purchase takes place subsequently or not. Therefore, the reasons of looking for online information can be distinguished the following way:

- Looking for quality-related information (e.g. reading and following the opinions and ratings of users and relatives on forums and community sites).
- Searching for general information about foods (e.g. finding out detailed information about a certain product based on the QR codes detected with a smartphone).
- Browsing for recipes (e.g. finding out the proper proportions of raw materials needed for preparing a given

food on dedicated recipe websites (nosalty.hu))

- *Food factors which have positive effect on health* (surveying the health prevention and healing effects of various foods).

The last element of the above list, i.e., browsing for food factors which have positive effect on health, is of key importance from the aspect of this research. This element can be approached in a way that the purpose is to look for information about products which can contribute to healthy food consumption.

In addition to searching for food- and health-related online information, this paper also combines the previously examined factors on the basis of other previous and current research. Consequently, browsing for information about healthy or conscious food consumption is taken as a basis.

MOSKOWICZ et al. (2004) thoroughly examined people's browsing activities for online information about functional foods. Based on a conjoint analysis, it was concluded that Internet sites provide favourable opportunities for obtaining information about functional foods. These foods constitute a so-called virtual food category which cannot be interpreted from the legal aspect (LUGASI 2007 and 2008, LELOVICS 2010). A food product is considered functional if it is proved that it has a beneficial effect on certain functions of the organism (reaching a better health status, reducing the risk of illnesses) in addition to the usual nourishment physiological effects (SZAKÁLY, 2011).

SOÓS (2014) analysed the available information sources of health food consumption and their credibility with three focus group discussions (people satisfied with their body weight, those who wish to gain and those who would like to lose weight) and an online questionnaire survey (non-representative survey with 500 participants). *Based on the outcomes of the focus group discussions*, it can be concluded that one of the most popular methods of obtaining information about healthy food consumption (especially for those dissatisfied with their body weight) is targeted online search and spontaneously reading advertisements which randomly appear on websites, mailing systems and community sites. Consumers consider online information to be credible if they are retrieved by a specialist or dietitian. They think the same way if 8-10 close acquaintances of them suggest the same method (e.g. via Facebook). As regards the *online questionnaire survey*, SOÓS (2014) concludes that respondents mainly use Internet search engines (60.6%) concerning food consumption. They ask for the opinions of friends (50.6%) and acquaintances (40.0%) to a smaller extent. Surprisingly, only 26.6% ask for the expert's opinions of physicians and dieticians. There is a reverse situation concerning the credibility of information sources. Physicians and dieticians were considered to be the most credible sources of information to a proportion of 63.8%, followed by educational and specialised textbooks (41.6%) and friends and acquaintances (26.2%). Search engines which were rated to be the first in the previous category only had a 26.2% proportion in terms of credibility. It is also important to point out that the conventional communication channels such as television, radio and printed media were rated to be among the last ones in both examined categories. Finally, the

role of community sites has to be emphasised as nearly one third of respondents consider them to be an effective source of information about healthy food consumption. However, only 11% of the find this source to be credible.

4. CONCLUSIONS

Putting together a proper diet is one of the main components of healthy lifestyle. Lots of information are needed to put together a healthy diet from various foods which can contribute to converting to and maintaining a healthy lifestyle. Consequently, the main objective of this paper is to determine and provide examples of the characteristics of online marketing which can help consumers in consciously converting to healthy lifestyle. Of the various factors, special emphasis was placed on the online appearance of health-related information.

The main conclusions of the research are elaborated as follows:

The Internet can be regarded as an increasingly important and credible source of information when looking for information about healthy/conscious food consumption. It proves the increasingly significant role of the Internet that around one quarter of the respondents taking part in the questionnaire survey browse the Internet for food-related information for similar amount of time or more in comparison with conventional media. Other surveys pointed out the role of online search engines. In addition, it was also specifically pointed out that the credibility of information sources mainly depends on the type of information. Information obtained from physicians or dieticians and close acquaintances was considered to be the most credible.

The role of community sites is increasingly significant, although there is still room for development in terms of credibility. Community sites can be regarded as the second most important source of information following online search engines when it comes to browsing for food-related information on the Internet. During the analysis of searching for information about healthy food consumption, it turned out that one third of those taking part in the online questionnaire survey consider community sites as a significant source of information. However, only one tenth of respondents find these online sources credible.

FEHÉR (2011) had previously examined information consumption's reason for existence. However, most statements referred to the packaging of foods. In the opinion of the author, online information consumption can appear in a specific online environment and the aim is not to buy certain foods but to obtain information about them, especially in terms of health factors.

Altogether, it can be concluded that healthy lifestyle-related information has a significant role in online sources. Consequently, Internet can be regarded as a preferred source of information in terms of the conscious converting to healthy lifestyle.

SUMMARY

One of the main components of healthy lifestyle is proper diet. When putting together one's diet, lots of information are needed in order to be able to pick from various foods which contribute to converting to a healthier lifestyle and maintaining it.

The main purpose of this study is to determine and show examples of the characteristics of online marketing which could help consumers in the conscious conversion to healthy lifestyle. Of the various factors, great emphasis is placed on online health-related information.

Based on the research findings, it can be concluded that healthy lifestyle-related information has a significant role in online sources. Consequently, Internet can be regarded as a preferred source of information in terms of the conscious converting to healthy lifestyle.

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